

08.31.10 – TUESDAY

OBJECTIVE : Naming Covalent, ionic, and acidic compounds

PREGAME: Name the following compounds:



HOMEWORK:

Complete the Nomenclature Review – Quiz Thursday!

HOW DO WE NAME COMPOUNDS?

- CO_2 • Carbon dioxide
- H_2O • Dihydrogen monoxide

NOMENCLATURE!

- MgCl_2 • Magnesium chloride
- HCl • Hydrochloric acid
- H_2SO_4 • Sulfuric acid

METALIC PROPERTIES

NON METALS

METALIC PROPERTIES																			
H																	He		
Li	Be									METALLOIDS				B	C	N	O	F	Ne
Na	Mg	METALS												Al	Si	P	S	Cl	Ar
K	Ca	Se	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr		
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe		
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn		
Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds										

Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

CHARGES (OXIDATION STATE)

[illegible]

NEUTRAL

[illegible]

LOOK AT THE FIRST ELEMENT!!

METAL = MUST BE IONIC

- Does it have a polyatomic?
- Does it have a transition metal?

NONMETAL = MUST BE COVALENT

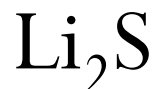
HYDROGEN = MUST BE AN ACID

- Binary Acid?
- Oxyacid? (Polyatomic)

FIRST ELEMENT METAL = IONIC

- NO prefixes
- The simplest whole number ratio is generally the ionic formula. (empirical formula)

Type I:
Binary



Type II:
Polyatomic



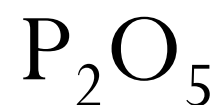
Type III:
Transition



FIRST ELEMENT NONMETAL = COVALENT

- Greek Prefixes

- Mono (1), di (2), tri (3), tetra (4), penta (5), etc....
- First nonmetal keeps element name
- Change ending of second nonmetal to –ide



FIRST ELEMENT HYDROGEN = ACID

Binary

H and another element

Use hydro- prefix

Use -ic suffix

HCl HF HBr

H₂S HI

Oxyacid / Poly

H and 2 or more

NO prefix

If poly -ate → -ic

If poly -ite → -ous

HNO₃ H₃PO₄

H₃PO₃ H₂SO₄

ACID NOMENCLATURE

